

A method of altering the substrate specificity of phosphoinositide-dependent protein kinase 1 (PDK1) wherein the said PDK1 is exposed to a polypeptide which comprises the amino acid sequence Phe/Tyr-Xaa-Xaa-Phe/Tyr-Zaa-Phe/Tyr wherein Zaa represents a negatively charged amino acid residue. The PDK1 with altered substrate specificity is capable of phosphorylating the underlined residue in a polypeptide with an amino acid sequence corresponding to the consensus sequence Phe/Tyr-Xaa-Xaa-Phe/Tyr-Ser/Thr-Phe/Tyr. The PDK1 with altered specificity may be useful in screening assays and for phosphorylating substrates having the above consensus sequence.